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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/689,313	10/20/2003	Yongdong Wang	CE-003	2869

7590 05/13/2005

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EXAMINER	
LE, JOHN H	
ART UNIT	**PAPER NUMBER**
2863	

DATE MAILED: 05/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/689,313	Applicant(s) WANG, YONGDONG
	Examiner John H. Le	Art Unit 2863

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 March 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *50-118* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *50,52,53,56-58,67,81-85,88,90,91,94 and 116-118* is/are rejected.

7)☒ Claim(s) *51,54,55,59-66,68-80,86,87,92,93 and 95-115* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *20 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *03/31/2005*.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

Response to Amendment

1. This office action is in response to applicant's amendment received on 03/25/2005.

Claims 1-49 have been cancelled.

Claims 50-52, 71, 78, 81-82, 85, 88-89, 98, 106 have been amended.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 50 and 82 are rejected under 35 U.S.C. 102(b) as being anticipated by Wang et al. (USP 6,138,082).

Regarding claim 1, Wang et al. teach a method for calculating calibration filters for a Mass Spectrometry (MS) instrument system (e.g. Col.4, lines 65-66, Col.8, lines 60-65, Col.11, lines 6-9), comprising the step of: obtaining, from a given calibration standard, at least one actual mass spectral peak shape function (function range for computing actual range, Col.8, lines 12-32, 60-65), specifying mass spectral target peak shape functions within respective mass spectral ranges (e.g. Col.6, lines 10-36, Col.7, lines 16-40, Col.8, lines 12-32), and performing a deconvolution operation between the obtained at least one mass spectral peak shape function and the mass spectral target peak shape functions

to obtain at least one calibration filter from a result of the deconvolution operation (e.g. Col.6, lines 17-43).

Regarding claim 82, Wang et al. teach a method of processing mass spectral data (e.g. Col.11, lines 6-9), comprising the steps of applying a total filtering matrix to the raw mass spectral data to obtain calibrated mass spectral data (e.g. Col.4, lines 47-66, Col.6, lines 11-43), wherein the total filtering matrix is formed by: obtaining, from a given calibration standard, at least one actual mass spectral peak shape function (function range for computing actual range, Col.8, lines 12-32, 60-65), specifying mass spectral target peak shape functions within respective mass spectral ranges (e.g. Col.6, lines 10-36, Col.7, lines 16-40, Col.8, lines 12-32), and performing a deconvolution operation between the obtained at least one mass spectral peak shape function and the mass spectral target peak shape functions to obtain at least one calibration filter from a result of the deconvolution operation (e.g. Col.6, lines 17-43).

Regarding claim 53, Wang et al. disclose the at least one calibration filter comprises at least two calibration filters, and said method further comprises the step of further interpolating between the at least two calibration filters to obtain at least one other calibration filter within a desired mass range (e.g. Fig.1, Col.4, lines 65-66).

Regarding claim 56, Wang et al. disclose performing a convolution and deconvolution operation employs a Fourier Transform and a matrix multiplication (Col.6, lines 10-43).

Regarding claim 57, Wang et al. disclose performing a convolution and deconvolution operation employs a Fourier Transform (Col.5, lines 3-18) and a matrix multiplication (Col.6, lines 18-43).

Regarding claim 58, Wang et al. disclose interpolating data corresponding to the mass spectral peak shape functions to obtain at least one other mass spectral peak shape function within a desired mass range (e.g. Col.6, lines 10-36, Col.7, lines 16-40, Col.8, lines 12-32).

Regarding claim 67, Wang et al. disclose performing pre-calibration instrument-dependant transformations on raw mass spectral data; and performing post-calibration instrument-dependent transformations on a calculated data set corresponding to a test sample (e.g. Col.7, lines 4-65).

Regarding claim 81, Wang et al. disclose adding the calibration standard into a test sample one of prior to and in real-time through at least one of continuous infusion and online mixing so as to acquire both calibration data and test data in a single mass spectral acquisition (e.g. Fig.3, Col.7, line 4-Col.8, line 11).

Regarding claim 83, Wang et al. disclose interpolating the raw mass spectral data onto a same mass axis as that required by the total filtering matrix (e.g. Fig.1, Figs.3-5, Col.7, line 41-Col.8, line 59).

Regarding claim 84-85, Wang et al. disclose interpolating the calibrated mass spectral data onto any desired mass axis different from that given by the total filtering matrix (e.g. Col.8, lines 12-59); applying a weighted regression operation (e.g. Col.6, lines 10-36) to the calibrated mass spectral data to obtain

at least one of integrated peak areas, actual masses and other mass spectral peak data for the mass spectral peaks (e.g. Col.6, lines 10-36, Col.7, lines 16-40, Col.8, lines 12-32).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 52 and 88 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang et al. (USP 6,138,082) in view of Rather (US 2003/0218129).

Regarding claims 52 and 88, Wang et al. teach a method for obtaining at least one actual mass spectral peak shape function (e.g. Col.6, lines 17-43, Col.8, lines 12-32, 60-65), comprising the steps of: calculating, for a given calibration standard, corresponding to the at least one mass spectral peak (Col.8, lines 12-32, 60-65); performing convolution operations on calculated using a same continuous function with a narrow peak width; and performing a deconvolution operation measured peak after said convolution operations to obtain the at least one actual mass spectral peak shape function (e.g. Col.5, line 59-Col.6, line 43).

Regarding claims 90-91, and 94, Wang et al. teach performing a convolution and deconvolution operation employs a Fourier Transform (Col.5,

lines 3-18) and a matrix multiplication (Col.6, lines 18-43), interpolating data corresponding to the mass spectral peak shape functions to obtain at least one other mass spectral peak shape function within a desired mass range (e.g. Col.6, lines 10-36, Col.7, lines 16-40, Col.8, lines 12-32), specifying mass spectral target peak shape function (e.g. Col.6, lines 10-36, Col.7, lines 16-40, Col.8, lines 12-32); and performing a deconvolution operation between the obtained at least one mass spectral peak shape function and the mass spectral target peak shape functions (e.g. Col.6, lines 17-43).

Regarding claim 116-118, Wang et al. disclose step of adding the calibration standard into a test sample one of prior to and in real-time through at least one of continuous infusion and online mixing so as to acquire both calibration data and test data in a single mass spectral acquisition (e.g. Fig.3, Col.7, line 4-Col.8, line 11), a mass spectrometer having associated therewith a computer for performing data analysis functions of data produced by the mass spectrometer (e.g. Fig.1, Col.3, line 66-Col.4, line 2).

Wang et al. fail to teach isotope abundances and theoretical mass locations of the isotopes, calculated relative isotope abundances and measured isotope peak clusters using a same continuous function with a narrow peak width.

Rather discloses isotope abundances and theoretical mass locations of the isotopes, calculated relative isotope abundances and measured isotope peak clusters using a same continuous function with a narrow peak width (e.g. [0065]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include isotope abundances and theoretical mass locations of the isotopes, calculated relative isotope abundances and measured isotope peak clusters using a same continuous function with a narrow peak width as taught by Rather in a method for obtaining at least one actual mass spectral peak shape function of Wang et al. for the purpose of providing a method for detecting ions in high resolution time-of-flight mass spectrometers (Rather, Abstract).

Allowable Subject Matter

6. Claims 51, 54-55, 59-66, 68-80, 86, 92-93, and 95-115 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 51, none of the prior art of record teaches or suggests the combination of a method for calculating calibration filters for a Mass Spectrometry (MS) instrument system, comprising the step of: obtaining, from a given calibration standard, at least one mass spectral peak shape function, specifying mass spectral target peak shape functions centered-at midpoints within respective mass spectral ranges, performing a deconvolution operation between the obtained at least one mass spectral peak shape function and the mass spectral target peak shape functions to obtain at least one calibration filter

from a result of the deconvolution operation, wherein the at least one mass spectral peak shape function can be obtained from a section of a mass spectrum that contains a single isotope peak with no significant overlaps from other isotope peaks. It is these limitations as they are claimed in the combination with other limitations of claim, which have not been found, taught or suggested in the prior art of record, that make these claims allowable over the prior art.

Regarding claim 54, none of the prior art of record teaches or suggests the combination of a method for calculating calibration filters for a Mass Spectrometry (MS) instrument system, comprising the step of: obtaining, from a given calibration standard, at least one mass spectral peak shape function, specifying mass spectral target peak shape functions centered-at midpoints within respective mass spectral ranges, performing a deconvolution operation between the obtained at least one mass spectral peak shape function and the mass spectral target peak shape functions, and calculating at least one calibration filter from a result of the deconvolution operation, wherein the at least one calibration filter comprises at least two calibration filters, and said method further comprises the step of further interpolating between the at least two calibration filters to obtain at least one other calibration filter within a desired mass range, wherein said interpolating step comprises the steps of collecting the at least two calibration filters as vectors in a matrix for decomposition; decomposing the matrix that includes the at least two calibration filters; interpolating between decomposed vectors of the matrix to obtain interpolated vectors; and reconstructing the at least one other calibration filter using the

interpolated vectors. It is these limitations as they are claimed in the combination with other limitations of claim, which have not been found, taught or suggested in the prior art of record, that make these claims allowable over the prior art.

Regarding claim 59, none of the prior art of record teaches or suggests the combination of a method for calculating calibration filters for a Mass Spectrometry (MS) instrument system, comprising the step of: obtaining, from a given calibration standard, at least one mass spectral peak shape function, specifying mass spectral target peak shape functions centered-at midpoints within respective mass spectral ranges, performing a deconvolution operation between the obtained at least one mass spectral peak shape function and the mass spectral target peak shape functions, and calculating at least one calibration filter from a result of the deconvolution operation, wherein said obtaining step further comprises the step of interpolating data corresponding to the mass spectral peak shape functions to obtain at least one other mass spectral peak shape function within a desired mass range, wherein said interpolating step comprises the steps of: collecting the mass spectral peak shape functions as vectors in a matrix for decomposition; decomposing the matrix that includes the mass spectral peak shape functions; interpolating between decomposed vectors of the matrix to obtain interpolated vectors; and reconstructing the at least one other mass spectral peak shape function using the interpolated vectors.. It is these limitations as they are claimed in the combination with other limitations of claim, which have not been found, taught or suggested in the prior art of record, that make these claims allowable over the prior art.

Regarding claim 61, none of the prior art of record teaches or suggests the combination of a method for calculating calibration filters for a Mass Spectrometry (MS) instrument system, comprising the step of: obtaining, from a given calibration standard, at least one mass spectral peak shape function, specifying mass spectral target peak shape functions centered-at midpoints within respective mass spectral ranges, performing a deconvolution operation between the obtained at least one mass spectral peak shape function and the mass spectral target peak shape functions, and calculating at least one calibration filter from a result of the deconvolution operation, wherein said obtaining step further comprises the step of interpolating data corresponding to the mass spectral peak shape functions to obtain at least one other mass spectral peak shape function within a desired mass range, wherein said performing step comprises the step of performing a deconvolution operation between mass spectral target peak shape functions and one of measured mass spectral peak shape functions and the calculated mass spectral peak shape functions to convert the measured mass spectral peak shape functions and the at least one other mass spectral peak shape function to the mass spectral target peak shape functions within the respective mass spectral ranges; and wherein said calculating step comprises the step of calculating at least one calibration filter from the deconvolution operation. It is these limitations as they are claimed in the combination with other limitations of claim, which have not been found, taught or suggested in the prior art of record, that make these claims allowable over the prior art.

Regarding claim 66, none of the prior art of record teaches or suggests the combination of a method for calculating calibration filters for a Mass Spectrometry (MS) instrument system, comprising the step of: obtaining, from a given calibration standard, at least one mass spectral peak shape function, specifying mass spectral target peak shape functions centered-at midpoints within respective mass spectral ranges, performing a deconvolution operation between the obtained at least one mass spectral peak shape function and the mass spectral target peak shape functions, calculating at least one calibration filter from a result of the deconvolution operation, and pre-aligning mass spectral isotope peaks based on a least squares polynomial fit between centroid masses of the calculated relative isotope abundances and those of the measured isotope peak clusters, in a pre-calibration step performed subsequent to said calculating step. It is these limitations as they are claimed in the combination with other limitations of claim, which have not been found, taught or suggested in the prior art of record, that make these claims allowable over the prior art.

Regarding claim 74, none of the prior art of record teaches or suggests the combination of a method for calculating calibration filters for a Mass Spectrometry (MS) instrument system, comprising the step of: obtaining, from a given calibration standard, at least one mass spectral peak shape function, specifying mass spectral target peak shape functions centered-at midpoints within respective mass spectral ranges, performing a deconvolution operation between the obtained at least one mass spectral peak shape function and the mass spectral target peak shape functions, calculating at least one calibration

filter from a result of the deconvolution operation, performing a pre-calibration mass spacing adjustment from a non-uniformly spaced mass acquisition interval to a uniformly spaced mass interval; and performing a post-calibration mass spacing adjustment from the uniformly spaced mass interval to a reporting interval. It is these limitations as they are claimed in the combination with other limitations of claim, which have not been found, taught or suggested in the prior art of record, that make these claims allowable over the prior art.

Regarding claim 86, none of the prior art of record teaches or suggests the combination of a method of processing raw mass spectral data, comprising the steps of applying a total filtering matrix to the raw mass spectral data to obtain calibrated mass spectral data, wherein the total filtering matrix is formed by: obtaining, from a given calibration standard, at least one mass spectral peak shape function, specifying mass spectral target peak shape functions within respective mass spectral ranges, performing a deconvolution operation between the obtained at least one mass spectral peak shape function and the mass spectral target peak shape functions, calculating at least one calibration filter from a result of the deconvolution operation, and applying a weighted regression operation to the calibrated mass spectral data to obtain at least one of integrated peak areas, actual masses and other mass spectral peak data for the mass spectral peaks, wherein weights of the weighted regression operation are proportional to an inverse of mass spectral variances. It is these limitations as they are claimed in the combination with other limitations of claim, which have

not been found, taught or suggested in the prior art of record, that make these claims allowable over the prior art.

Regarding claim 87, none of the prior art of record teaches or suggests the combination of a method of processing raw mass spectral data, comprising the steps of applying a total filtering matrix to the raw mass spectral data to obtain calibrated mass spectral data, wherein the total filtering matrix is formed by: obtaining, from a given calibration standard, at least one mass spectral peak shape function, specifying mass spectral target peak shape functions within respective mass spectral ranges, performing a deconvolution operation between the obtained at least one mass spectral peak shape function and the mass spectral target peak shape functions, calculating at least one calibration filter from a result of the deconvolution operation, and applying multivariate statistical analysis to the calibrated mass spectral data to at least one of quantify, identify, and classify test samples. It is these limitations as they are claimed in the combination with other limitations of claim, which have not been found, taught or suggested in the prior art of record, that make these claims allowable over the prior art.

Regarding claim 89, none of the prior art of record teaches or suggests the combination of a method for obtaining at least one mass spectral peak shape function, comprising the steps of: calculating, for a given calibration standard, relative isotope abundances and actual mass locations of isotopes corresponding to the at least one mass spectral peak; performing convolution operations on both calculated relative isotope abundances and measured isotope peak clusters

using a same continuous function with a narrow peak width; and performing a deconvolution operation between the measured isotope peak clusters and calculated isotope peak clusters after said convolution operations to obtain the at least one mass spectral peak shape function, wherein the at least one mass spectral peak shape function is obtained from a section of a mass spectrum that contains at least one of many isotopes from a known ion in a calibration standard. It is these limitations as they are claimed in the combination with other limitations of claim, which have not been found, taught or suggested in the prior art of record, that make these claims allowable over the prior art.

Regarding claim 92, none of the prior art of record teaches or suggests the combination of a method for obtaining at least one mass spectral peak shape function, comprising the steps of: calculating, for a given calibration standard, relative isotope abundances and actual mass locations of isotopes corresponding to the at least one mass spectral peak; performing convolution operations on both calculated relative isotope abundances and measured isotope peak clusters using a same continuous function with a narrow peak width; and performing a deconvolution operation between the measured isotope peak clusters and calculated isotope peak clusters after said convolution operations to obtain the at least one mass spectral peak shape function, interpolating data corresponding to the mass spectral peak shape functions to obtain at least one other mass spectral peak shape function within a desired mass range, wherein said interpolating step comprises the steps of collecting the mass spectral peak shape functions as vectors in a matrix for decomposition; decomposing the matrix that

includes the mass spectral peak shape functions; interpolating between decomposed vectors of the matrix to obtain interpolated vectors; and reconstructing the at least one other mass spectral peak shape function using the interpolated vectors.. It is these limitations as they are claimed in the combination with other limitations of claim, which have not been found, taught or suggested in the prior art of record, that make these claims allowable over the prior art.

Regarding claim 95, none of the prior art of record teaches or suggests the combination of a method for obtaining at least one mass spectral peak shape function, comprising the steps of: calculating, for a given calibration standard, relative isotope abundances and actual mass locations of isotopes corresponding to the at least one mass spectral peak; performing convolution operations on both calculated relative isotope abundances and measured isotope peak clusters using a same continuous function with a narrow peak width; performing a deconvolution operation between the measured isotope peak clusters and calculated isotope peak clusters after said convolution operations to obtain the at least one mass spectral peak shape function; specifying mass spectral target peak shape function; and performing a deconvolution operation between the obtained at least one mass spectral peak shape function and the mass spectral target peak shape functions, wherein said performing step comprises the step of performing a deconvolution operation between mass spectral target peak shape functions and one of measured mass spectral peak shape functions and calculated mass spectral peak shape functions to convert measured mass spectral peak shape functions and the at least one other mass spectral peak

shape function to the mass spectral target peak shape functions. It is these limitations as they are claimed in the combination with other limitations of claim, which have not been found, taught or suggested in the prior art of record, that make these claims allowable over the prior art.

Regarding claim 101, none of the prior art of record teaches or suggests the combination of a method for obtaining at least one mass spectral peak shape function, comprising the steps of: calculating, for a given calibration standard, relative isotope abundances and actual mass locations of isotopes corresponding to the at least one mass spectral peak; performing convolution operations on both calculated relative isotope abundances and measured isotope peak clusters using a same continuous function with a narrow peak width; performing a deconvolution operation between the measured isotope peak clusters and calculated isotope peak clusters after said convolution operations to obtain the at least one mass spectral peak shape function; pre-aligning mass spectral isotope peaks based on a least squares fit between centroid masses of the calculated relative isotope abundances and those of measured isotope peak clusters, in a pre-calibration step performed subsequent to said calculating step. It is these limitations as they are claimed in the combination with other limitations of claim, which have not been found, taught or suggested in the prior art of record, that make these claims allowable over the prior art.

Regarding claim 109, none of the prior art of record teaches or suggests the combination of a method for obtaining at least one mass spectral peak shape function, comprising the steps of: calculating, for a given calibration standard,

relative isotope abundances and actual mass locations of isotopes corresponding to the at least one mass spectral peak; performing convolution operations on both calculated relative isotope abundances and measured isotope peak clusters using a same continuous function with a narrow peak width; performing a deconvolution operation between the measured isotope peak clusters and calculated isotope peak clusters after said convolution operations to obtain the at least one mass spectral peak shape function; performing a pre-calibration mass spacing adjustment from a non-uniformly spaced mass acquisition interval to a uniformly spaced mass interval; and performing a post-calibration mass spacing adjustment from the uniformly spaced mass interval to a reporting interval. It is these limitations as they are claimed in the combination with other limitations of claim, which have not been found, taught or suggested in the prior art of record, that make these claims allowable over the prior art.

Response to Arguments

7. Applicant's arguments filed 03/25/2005 have been fully considered but they are not persuasive.

-Applicant argues that the prior did not teach "actual mass spectral peak shape function" as cited in claim 50.

Examiner position is that Wang et al. teach actual mass spectral peak shape function (function range for computing actual range, Col.8, lines 12-32, 60-65), specifying mass spectral target peak shape functions within respective mass spectral ranges (e.g. Col.6, lines 10-36, Col.7, lines 16-40, Col.8, lines 12-32).

-Applicant argues that the prior did not teach, "the at least one mass spectral peak shape function can be obtained from a section of a mass spectrum that contains a single isotope peak with no significant overlaps from other isotope peaks" as cited in claim 51.

Examiner agrees, therefore claim 51 is allowed.

-Applicant argues that the prior did not teach "mass locations, actual mass spectral peak shape function" as cited in claims 52 and 88.

Examiner position is that Wang et al. teach mass locations (points) (e.g. Col.8, lines 22-59), actual mass spectral peak shape function (function range for computing actual range, Col.8, lines 12-32, 60-65), specifying mass spectral target peak shape functions within respective mass spectral ranges (e.g. Col.6, lines 10-36, Col.7, lines 16-40, Col.8, lines 12-32).

-Applicant argues that the prior did not teach "adding the calibration standard into a test sample one of prior to and in real-time through at least one of continuous infusion and online mixing so as to acquire both calibration data and test data in a single mass spectral acquisition" as cited in claim 81.

Examiner position is that Wang et al. teach adding the calibration standard into a test sample one of prior to and in real-time through at least one of continuous infusion and online mixing so as to acquire both calibration data and test data in a single mass spectral acquisition (e.g. Fig.3, Col.7, line 4-Col.8, line 11).

-Applicant argues that the prior did not teach "a mass spectrometer" as cited in claims 83, 116-117.

Examiner position is that Wang et al. teach a mass spectrometer (Col.11, lines 6-9).

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Specifically Wang el al. has been added to second ground of rejection.

Contact Information

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John H Le whose telephone number is 571-272-2275. The examiner can normally be reached on 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E Barlow can be reached on 571-272-2269. The fax

phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

John H. Le
Patent Examiner-Group 2863
May 9, 2005

BRYAN BUI
PRIMARY EXAMINER
5/12/05